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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,940	02/27/2002	Robert Lindsay Osbon	5420	8380
7590	03/09/2005		EXAMINER	
Terry T. Moyer P.O. Box 1927 Spartanburg, SC 29304			TORRES VELAZQUEZ, NORCA LIZ	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/083,940	OSBON ET AL.
	Examiner Norca L. Torres-Velazquez	Art Unit 1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 23 December 2004.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1,7-14 and 19-29 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,7-14 and 19-29 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
     Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_

5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed December 23, 2004 have been fully considered but they are not persuasive.

a. Applicants have amended independent claim 1 to include (a) the limitation that the fabric is comprised of 65% polyester and 35% nylon 6, 6 and (b) the limitation that the spun-bonded nonwoven fabric achieves a more uniformly dyed fabric. Applicants argue that by claiming the fabric as shown in the Examples and by including the limitation that the fabric achieves improved dye uniformity, Applicants have demonstrated unexpected results with regard to the treatment of the particular fabric with an air impingement process.

It is the Examiner's position that the prior art of record teaches the use of polyethylene terephthalate and nylon 6,6 in the continuous multi-component fibers. Particularly, the Groitzsch et al. ('462) reference teaches a 65/35 ratio of the two components. (Col. 5, lines 45-47) Groten et al. ('785) teaches in one of the examples a 60/40 ratio. (Col. 5, table and Col. 6, line 26) It is the Examiner's position that the ratio taught by Groten et al. will also read on the *about* 65% polyethylene terephthalate and *about* 35% nylon 6,6 claimed herein. With regards to the "improved dye uniformity", it is noted that the fabrics of Groitzsch et al. and Groten et al. provide similar structures to the ones claimed herein and while the process of Dischler is generally employed in order to improve the hand or feel of a textile substrate, it is the Examiner's position that the structural and chemical limitations of the claims have been met; therefore, the nonwoven

must also have the presently claimed property of dye uniformity. As noted by Applicants, the air impingement process opens up the dense fiber-to-fiber construction of the fabric creating available space, which allows the dye to further penetrate to fibers deep within the treated dyed fabric. Therefore, it is the Examiner's interpretation that the process of air impingement taught by Dischler will inherently provide the claimed property by producing an open fiber structure in the fabrics of Groitzsch et al. and Groten et al.

It is further noted, "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ 2d 1655, 1658 (Fed. Cir. 1990). Therefore, the *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 562 F.2d at 1255, 195 USPQ at 433. Applicants arguments indicating that the process of Dischler et al. is generally employed in order to improve the hand or feel of a textile substrate is noted, however, it is the Examiner's position that the treatment of Dischler et al. does produce a structure with broken fiber-to-fiber bonds that will provide with an improved dye uniformity in the fabric. Applicant's examples have been considered, however, the Examiner maintains the position above that the structure produced by the process of Dischler et al. will inherently possess the claimed dye uniformity. It is noted that Applicant's presented examples do not show that the prior art products do not possess the characteristics of the claimed product.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 7-14 and 19-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over GROten et al. (US 5,899,785) in view of DISCHLER (US 4,918,795) as set forth in previous action.

GROten et al. discloses a nonwoven lap that may be used as a textile for the fabrication of clothing or clothing linings. The reference also teaches the use of the nonwoven lap in textiles for the fabrication of clothes for domestic and industrial cleaning as well as for clean rooms. (Column 5, lines 10-26). It is further noted that GROten et al. uses the nonwoven lap in clothing materials and the Examiner understands that the teachings of GROten do not preclude the use of it in any other application such as a bedding that also requires certain degree of softness and breathability as the one expected in clothing materials that are in close contact with a person. The nonwoven lap of GROten is made of continuous filaments, crimped or not, obtained by means of a controlled direct spinning process, with a weight between 5 g/m<sup>2</sup> and 600 g/m<sup>2</sup>, and formed of composite filaments with a filament number between 0.3 dTex and 10 dTex, the composite filaments are formed of at least three elementary filaments of at least two different materials. Each elementary filament has a filament number between 0.005 dTex and 2 dTex. (Abstract and Column 2, lines 11-24) The reference teaches making the nonwoven by the process steps of extruding/spinning, cooling and/or drawing [spunbonding], and napping the

nonwoven prior to, simultaneously or successively, bonding and consolidating the nonwoven by mechanical means such as intense needle punching, the action of pressurized streams of fluid, thermal means, or chemical means. The composite filaments are at least partially separated into their elementary filaments during the course of the operations of bonding and consolidation. (Column 2, lines 36-48) The reference teaches that the ratio of the cross-sectional area of each elementary filament to the total cross-sectional area of the unitary filament being between 0.5% and 90%. (Column 2, lines 22-24) The reference further teaches that the composite filaments are constituted by different immiscible and/or incompatible polymer materials. Among the polymer materials taught by the reference are: (polyester/polyamide). (Column 2, lines 55-65) In Example 1, the reference teaches the use of polyethylene terephthalate and polyamide 6 at a ratio of 60/40. (Col. 5, table and Col. 6, lines 26). Further on Example 3, it teaches the use of polyethylene terephthalate/polyamide 66 materials. (Col. 7, lines 48-49)

Further the reference teaches that the nonwoven lap may, after consolidation, be subjected to a binding or dyeing and finishing treatment of a chemical nature, such as anti-pilling, hydrophilic treatment, or antistatic treatment, or a mechanical nature, such as napping, sanforizing or passing it through a tumbler. (Column 5, lines 1-9) The reference further teaches the importance of good drapeability in the fabric. (Refer to Col. 7, lines 9-12)

While the presently claimed plurality of broken fiber-to-fiber bonds would be expected in the fabric of GROTE from the use of pressurized streams of fluids during consolidation, these would be further obvious from the teachings of DISCHLER.

DISCHLER teaches a method of treating fabric by directing low-pressure air at near-sonic velocity between the fabric and a rigid plate to cause the fabric to vibrate at extremely high

rate. This high speed vibration causes saw tooth waves in the fabric to break fiber-to-fiber resin or finish bonds thereby decreasing the bending and shear stiffness to enhance the flexibility, drape and softness of the fabric. (Abstract)

Since both references are directed to producing fabrics with good drapeability, the purpose disclosed by DISCHLER would have been recognized in the pertinent art of GROTE.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the fabric of GROTE and provide it with an air impingement process that will produce broken fiber-to-fiber bonds motivated by the desire of further enhancing the flexibility, drape and softness of the fabric as disclosed by DISCHLER above.

With regards to the claimed weight-to-Bending Stiffness ratio and dye uniformity, it is the Examiner's position that the structural and chemical limitations the claims have been met; therefore the nonwoven must have the claimed weight-to-Bending Stiffness ratio and the claimed dye uniformity. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical process, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ 2d 1655, 1658 (Fed. Cir. 1990). Therefore, the *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 562 F.2d at 1255, 195 USPQ at 433. Further, with regards to the claimed improved

performance characteristics, these are also considered to be inherent to the product of GROTON upon treated by the process of DISCHLER.

Reliance upon inherency is not improper even though rejection is based on Section 103 instead of Section 102. *In re Skoner, et al.* (CCPA) 186 USPQ 80

4. Claims 1, 7-14 and 19-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over GROITZSCH et al. (US 6,448,462 B2) in view of DISCHLER (US 4,918,795) as set forth in previous action.

Groitzsch is concerned with the creation of a spunbond nonwoven fabric comprising continuous multicomponent fibers that are at least partially split along their length (abstract and col. 5, lines 53). The fabric exhibits the same improved aesthetic and performance characteristics claimed by applicant (col. 1, lines 31-36). Groitzsch teaches a combination of polyethylene terephthalate and nylon 6,6 (col. 5, lines 30-32). The polymers are used in applicant's claimed proportions (col. 5, lines 45-47). Groitzsch teaches a basis weight of 100 g/m<sup>2</sup> (col. 1, lines 43). Groitzsch teaches applicant's claimed moisture vapor transmission rate (col. 3, lines 22).

Groitzsch teaches an optional dye to be added to the fabric (col. 4, lines 5-6). Groitzsch teaches a full bath impregnation of dye (col. 3, lines 58-60). This would inherently allow the dye to reach the interior of the fibers and would result in increased uniform dying. Moreover, Groitzsch teaches subjecting the web to impingement by high-pressure fluid jets (col. 3, lines 16-17). This process opens up the dense fiber-to-fiber construction of the fabric and creates available space, which allows dyes to further penetrate to fibers deep within the treated dyed fabric. With respect to claims 19-29, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed

apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2USPQ2d 1647 (1987). The examiner is treating claims 19-29 as intended use claims, which bear no patentable weight, because they do not contain additional structural limitations.

While the presently claimed plurality of broken fiber-to-fiber bonds would be expected in the fabric of Groitzsch et al. from subjecting the web to impingement by high pressure fluid jets, these would be further obvious from the teachings of DISCHLER.

DISCHLER teaches a method of treating fabric by directing low-pressure air at near-sonic velocity between the fabric and a rigid plate to cause the fabric to vibrate at extremely high rate. This high-speed vibration causes saw-tooth waves in the fabric to break fiber-to-fiber resin or finish bonds thereby decreasing the bending and shear stiffness to enhance the flexibility, drape and softness of the fabric. (Abstract)

Since both references are directed to producing fabrics with high tactility, the purpose disclosed by DISCHLER would have been recognized in the pertinent art of Groitzsch.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the fabric of Groitzsch and provide it with an air impingement process that will produce broken fiber-to-fiber bonds motivated by the desire of further enhancing the flexibility, drape and softness of the fabric as disclosed by DISCHLER above.

With regards to the claimed weight-to-Bending Stiffness ratio and dye uniformity, it is the Examiner's position that the structural and chemical limitations the claims have been met; therefore the nonwoven must have the claimed weight-to-Bending Stiffness ratio and dye uniformity. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical process, a prima

facie case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). “When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.” *In re Spada*, 911 F.2d 705, 709, 15 USPQ 2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 562 F.2d at 1255, 195 USPQ at 433. Further, with regards to the claimed improved performance characteristics, these are also considered to be inherent to the product of GROTON upon treated by the process of DISCHLER. Reliance upon inherency is not improper even though rejection is based on Section 103 instead of Section 102. *In re Skoner, et al.* (CCPA) 186 USPQ 80.

**5. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 571-272-1484. The examiner can normally be reached on Monday-Thursday 8:00-4:00 pm

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Norca L. Torres-Velazquez  
Examiner  
Art Unit 1771

February 25, 2005  
March 4, 2005